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Willingness to use an in-hospital supervised inhalation room among people who smoke crack cocaine in Vancouver, Canada

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Abstract

Introduction and Aims—People who use illicit drugs (PWUD) often engage in drug use during hospitalization. Adverse outcomes may arise from efforts to conceal inpatient drug use, especially in hospital settings that rely on abstinence-based policies. Harm reduction interventions, including supervised drug consumption services, have not been well studied in hospital settings. This study examines factors associated with willingness to use an in-hospital supervised inhalation room (SIR) among people who smoke crack cocaine in Vancouver, Canada.

Design and Methods—Cross-sectional data from two open prospective cohorts of PWUD involving people who smoke crack cocaine were collected between June 2013 and May 2014. Multivariable logistic regression analyses were used to identify factors associated with willingness to use an in-hospital SIR.

Results—Among 539 participants, 320 (59.4%) reported willingness to use an in-hospital SIR. Independent factors positively associated with willingness included: ever used drugs in hospital (adjusted odds ratio [AOR] = 1.89), and daily non-injection crack use (AOR = 1.63). Difficulty accessing new crack pipes (AOR = 0.51) was negatively associated with willingness (all $P < 0.05$). The most commonly reported reasons for willingness were to: remain in hospital (50.6%), reduce drug-related risks (25.6%), and reduce the stress of hospital discharge for using drugs (24.7%).

Discussion and Conclusions—A high proportion of people who smoke crack cocaine reported willingness to use an in-hospital SIR, and those willing were more likely to report heavy

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drug use and previous in-hospital use. These findings highlight the potential utility of SIRs to complement existing in-hospital services for PWUD.

Keywords

addiction; crack cocaine; hospital utilisation; supervised inhalation room; supervised drug consumption services

INTRODUCTION

North America continues to be the world's largest market for powder and crack cocaine, driven largely by demand in the United States and Canada [1]. Compared to a global past-year cocaine use prevalence of 0.4% in 2015, Canada's past-year prevalence was 1.3% [2]. The prevalence of crack cocaine use specifically is also high and is largely concentrated among severely marginalised populations [2]. For instance, a study of people who inject drugs in seven Canadian cities found that approximately two-thirds of participants smoked crack in the previous six months [3]. Crack cocaine use is a particular concern in Vancouver's Downtown Eastside (DTES) neighbourhood, an area characterised by a large open drug market and high levels of poverty and homelessness. Indeed, an estimated 27% of the drug-using population in the DTES has reported smoking crack on a daily basis, and 61% reported having recently smoked cracked in public [4]. This same community has also been disproportionally affected by the ongoing overdose crisis. In 2016, there was an 80% increase in overdose deaths in British Columbia (BC), leading the provincial government to declare a public health emergency [5]. These deaths often involve the use of street drugs that have been contaminated with potent opioids such as fentanyl, which was detected in 83% of all overdose deaths in 2017 in BC [6]. While it remains unclear how many deaths have been attributed to fentanyl-contaminated crack cocaine, there have been an increasing number of reports of fentanyl contamination in crack cocaine in the area [5–7].

In addition to overdose, people who use crack cocaine contend with various other health-related harms [8, 9]. For instance, crack cocaine use has been associated with a particularly high incidence of oral cuts, ulcers and burns from using crack pipes that are broken or improvised from makeshift materials such as broken glass bottles and metal drinking cans [10]. People who use crack cocaine also suffer from disproportionately high rates of infectious diseases such as hepatitis C virus [10]. Further, crack cocaine smoking has been linked to respiratory damage and respiratory infections such as pneumococcal infections [9].

Barriers in accessing healthcare services further complicate the health of people who use crack cocaine. For example, people who smoke crack often experience difficulty in accessing services that provide sterile crack pipes or regulated crack smoking settings [11]. Further, various social-structural factors, including lack of available health services, perceived stigma and previous discrimination by healthcare professionals, may contribute to delays in seeking treatment and increased dependence on emergency services for primary care [12–14]. Acutely delayed presentations in people who use drugs (PWUD) with underlying poor health may require lengthy and costly hospital admissions [15]. However, many hospitals operate under abstinence-based drug policies with a common culture of

under-treating pain, opioid withdrawal and other health conditions among PWUD [16,17]. Such contextual forces have been shown to impede access to sterile drug-using paraphernalia and increase the likelihood of risky drug use behaviours during hospital admissions [15,17,18]. For example, PWUD may resort to using unsanitary makeshift equipment or using alone in hospital washrooms to avoid condemnatory actions and involuntary discharge, thereby increasing the risk of harms such as fatal overdose [15,18]. Moreover, abstinence-based hospital policies and negative treatment by healthcare professionals or security staff may compel admitted PWUD to prematurely leave hospital against medical advice (AMA) [17,19]. Indeed, a recent study found that 43% of hospitalised PWUD in Vancouver left hospital AMA at least once over a six-year study period [19]. This is a considerable concern given previously documented associations between leaving hospital AMA and increased risk of mortality or re-admission with more acute and complicated presentations requiring longer hospital admissions [20].

Supervised inhalation rooms (SIR) have the potential to minimise the aforementioned barriers to care and harms associated with crack cocaine smoking [12,21]. Modelled after supervised injection facilities, SIRs are regulated environments in which people can smoke pre-obtained drugs with sterile equipment under the supervision of nurses or other trained staff [22]. These facilities aim to reduce high-risk drug use practices and blood-borne infections, increase contact between PWUD and health and social services, and improve public order through reductions in public drug use [23]. To date, SIRs have been implemented in seven countries: Canada, Germany, Luxembourg, Netherlands, Switzerland, Spain and France [24–26]. In contrast with the significant evidence of the health and community benefits of supervised injection sites, rigorous evaluation of the specific outcomes of SIRs is lacking [24,27]. However, it is plausible that many of the demonstrated health benefits associated with supervised injection sites could extend to SIRs, with available evidence suggesting that SIRs have potential to improve public order, connect PWUD with health and social services, and reduce drug-related harms [11,25].

Previous local research has also found an unsanctioned SIR in Vancouver to be cost-effective [28], and has demonstrated a high level of willingness to use SIRs in community settings among PWUD [29]. However, little is known about the potential utility of SIRs within hospital settings. Although an in-hospital supervised drug consumption facility that includes a SIR recently began operating in Paris, France [30], and a SIF is planned to open in a hospital in Edmonton, Canada [25], such hospital-based supervised consumption services have not yet been evaluated. However, recent research suggests that the integration of harm reduction services into hospital settings has potential to improve hospital care retention, promote patient-centred care, and reduce the harms associated with in-hospital drug use including fatal overdose [13]. Therefore, as a preliminary needs assessment, we sought to investigate the prevalence and correlates of willingness to use an in-hospital SIR among people who use crack cocaine in Vancouver, Canada.

METHODS

Data were obtained from the Vancouver Injection Drug Users Study (VIDUS) and AIDS Care Cohort to evaluate Exposure to Survival Services (ACCESS), two open ongoing

prospective cohort studies of PWUD in Vancouver, Canada. These cohorts have been described in detail previously [31]. In brief, participants have been recruited through self-referral and street outreach since May 1996. VIDUS is a cohort of HIV-negative adult PWID who report having injected illicit drugs at least once in the month prior to enrolment. ACCESS is a cohort of HIV-positive adult drug users who have used illicit drugs other than or in addition to cannabis in the previous month at baseline. VIDUS participants who seroconvert to HIV following recruitment are transferred into the ACCESS study. All eligible participants provide written and informed consent. The two studies employ harmonised data collection and follow-up procedures to allow for combined analyses. Specifically, at baseline and semi-annually thereafter, study participants complete an interviewer-administered questionnaire and provide blood samples for serological testing or HIV monitoring, if applicable. The questionnaire elicits information about socio-demographic characteristics, drug use and other behaviours and engagement with healthcare services. Participants receive \$30 CAD for their time. These studies have received approval from Providence Health Care/University of British Columbia's Research Ethics Board.

The present cross-sectional analyses were restricted to participants who reported smoking crack cocaine at least once in the previous six months and were interviewed between June 2013 and May 2014. If a participant had more than one observation of crack cocaine use in the previous six months during the study period, the most recent observation was included in the analyses. The primary outcome of this study was the willingness to access an in-hospital SIR (yes vs. no or unsure), ascertained by asking participants the following hypothetical question: "If you were admitted into a hospital, and if there was a safe place to smoke your drugs (ventilated inhalation room) in that hospital, would you use it?" Explanatory variables were selected on the basis of previous studies that examined acceptability or use of supervised consumption sites among PWUD [29,32,33]. These variables included: age (per year increase); gender (male vs. female or transgender); ancestry (Caucasian vs. other); HIV serostatus (positive vs. negative); homelessness (yes vs. no); DTES residency (yes vs. no); cocaine injection (daily vs. <daily); heroin injection (daily vs. <daily); non-injection crack use (daily vs. <daily); binge non-injection drug use (yes vs. no); shared crack pipe (yes vs. no); difficulty accessing new crack pipes (yes vs. no); bought used crack pipe off the street (yes vs. no); smoked crack in public (yes vs. no); non-fatal overdose (yes vs. no); ever left hospital AMA (yes vs. no); ever used drugs in hospital (yes vs. no); ever treated poorly by healthcare professional (yes vs. no); enrolment in addiction treatment (yes vs. no); sex work involvement (yes vs. no); 'jacked up' by police (i.e. stopped, searched or detained for presumed drug possession) (yes vs. no). All drug use and behavioural variables refer to the previous six months unless otherwise indicated.

As a first step, characteristics of participants were examined, and later stratified by willingness to use an in-hospital SIR. Descriptive statistics on participant characteristics and bivariable analyses of factors associated with willingness to access an in-hospital SIR are presented in Table 1. As shown, a total of 539 people who use crack cocaine were included in the present study. Of these, the median age was 50 years (interquartile range 44.6–55.1), 67 reported being homeless in the last 6 months, 193 (35.8%) were female, and 291 (54.0%) were white. A total of 149 (27.6%) of participants reported smoking crack cocaine daily.

We then used bivariable logistic regression analyses to assess the association between each explanatory variable and willingness to use an in-hospital SIR. Next, we built a multivariable logistic regression model using an *a-priori*-defined statistical protocol based on examination of two criteria: the Akaike Information Criterion (AIC) and Type III *P* values. An initial model included all variables significant at $P < 0.10$ in bivariable analyses. After noting the model AIC, the variable with the largest type III *P* value was removed to create a reduced model. We continued this iterative process of recording the AIC and removing the variable with the largest *P* value until no explanatory variables remained in the model. The multivariable model that yielded the lowest AIC during this process was selected as the final model. As described previously [34], this procedure bases model selection on a balance of determining the best explanatory model with best model fit, with lower AIC values indicating better model fit and lower type III *P* values indicating greater variable significance. Finally, we examined responses to questions about reasons for being willing or unsure/unwilling to access an in-hospital SIR, respectively. Response options for willingness included: so that I could stay in hospital; reduce stress about being kicked out of hospital because I was using drugs; avoid dope sickness; improve pain management; reduce drug-related risks (e.g. overdose); and other. Response options for unwillingness included: could not get access to drugs; trying to abstain from drug use; fear of being judged by hospital staff; fear of being judged by other patients; and other. Further coding of 'other' reasons for unwillingness created the category: concerns of drug use interfering with treatment. Participants could provide more than one response. All statistical analyses were conducted with SAS version 9.4 (SAS Institute Inc., Cary, NC, USA), and all *P* values were two-sided.

RESULTS

Of the 539 people who use crack cocaine included in the present study, 320 (59.4%) participants reported willingness to use an in-hospital SIR. In multivariable logistic regression analyses, variables that remained significantly and positively associated with the willingness to use an in-hospital SIR included: ever used drugs in hospital (adjusted odds ratio [AOR] = 1.89; 95% confidence interval [CI] 1.31–2.73), and daily non-injection crack use (AOR = 1.63; 95% CI 1.08–2.48). Difficulty accessing new crack pipes was significantly and negatively associated with the willingness to access an in-hospital SIR (AOR = 0.51; 95% CI 0.30–0.86) (Table 2).

Among the 320 participants willing to use an in-hospital SIR, the most commonly reported reasons for willingness to do so were to: remain in hospital (162, 50.6%), reduce drug-related risks (82, 5.6%), and reduce the stress of being kicked out of hospital for using drugs (79, 24.7%). Among the 219 participants who were unsure or unwilling to access an in-hospital SIR, the most common reasons were: attempting drug abstinence (97, 44.3%), privacy concerns (27, 12.3%), and concerns of drug use interfering with treatment (20, 9.1%).

DISCUSSION

We found that approximately 60% of this community-recruited sample of people who smoke crack reported willingness to use an in-hospital SIR, if available. Individuals who were

willing to use an in-hospital SIR were more likely to have ever used drugs in hospital, and to use crack cocaine daily. Those who reported having difficulties accessing new crack pipes were less likely to report willingness. Among willing participants, the most commonly reported reasons included: to remain in hospital; reduce drug-related harms; and to reduce the stress of being kicked out of hospital for using drugs. Among unsure and unwilling participants, concerns regarding SIRs interfering with drug abstinence, privacy, and medical treatment were the primary reasons cited.

The tendency for SIR-willing people who smoke crack cocaine to have ever used drugs in hospital is largely consistent with a previous study demonstrating that having a history of in-hospital drug use was positively associated with willingness to use an in-hospital supervised injection facility among people who inject drugs [32]. This finding likely reflects an appreciation for in-hospital SIRs based on prior difficult hospitalisation experiences [15,17], particularly given that the primary reasons cited for willingness to use an in-hospital SIR were based on the desire to remain in hospital and circumvent structural pressures that promote risky drug use practices and premature discharges. This explanation aligns with the findings of with a previous qualitative study in which PWUD often expressed dissatisfaction with hospital drug-policing cultures that reinforce subordinate care for so-called “addicts” and drive them to use extreme measures to conceal their drug use [15]. Moreover, this association is consistent with previous studies that have found the demand for community SIRs to be partially driven by the desire to minimise exposure to authoritative pressures and stigma [11,35].

Our study also found that people who use non-injection crack cocaine daily were more likely to report willingness to use an in-hospital SIR. This is consistent with previous studies documenting associations between high-intensity drug use and willingness to use in-hospital supervised injection facilities [32]. Our finding of an association between daily crack use and willingness to use an in-hospital SIR is encouraging given that high-intensity use of crack cocaine has previously been linked to various high-risk sexual and drug use behaviours and harms [10] and that a key objective of supervised consumption facilities is to attract higher-risk PWUD [30]. Further, high-intensity use of crack cocaine has been associated with heavy reliance on emergency services and substantial barriers to retention in hospital care [36–37]. Thus, the provision of an in-hospital SIR may afford opportunities to engage this particular group of high-risk PWUD in appropriate care and thereby mitigate the risks associated with concealed in-hospital drug use or leaving hospital AMA.

We found that difficulty accessing new crack pipes was associated with reduced willingness to use an in-hospital SIR. This finding may suggest that those who are less willing to use in-hospital SIR have greater difficulty accessing crack pipes due to lower engagement with healthcare and harm reduction services in general [38]. For example, previous experiences of stigmatisation or negative interactions with healthcare professionals may contribute to a lack of trust and deter engagement with health services [13–15]. Alternatively, a lack of available services that adequately address the unique health needs of these individuals may partially explain their reluctance to engage in health and harm reduction services. These interpretations, however, cannot be drawn from the present study and further research investigating barriers to health services among people who use crack is needed. Nonetheless,

our findings suggest that the establishment of SIRs that provide sterile crack pipes and other equipment may support wider efforts to engage and retain underserved people who use crack cocaine in essential health and hospital care.

The most common reason for unwillingness was attempting drug abstinence. This finding may suggest that PWUD trying to abstain from crack cocaine view hospitals as protected environments removed from their routine triggers that reinforce drug use. Concern for privacy was the second most common reason for unwillingness. This may be in part related to the stigma of smoking crack cocaine or previous experiences of discrimination in healthcare settings [14]. However, previous studies have demonstrated that supervised consumption services help to disrupt stigma and to foster patient-provider interactions in which PWUD feel comfortable discussing their drug use and health needs [35]. Thus, the provision of an in-hospital SIR staffed with healthcare professionals with training in harm reduction and culturally-safe approaches to care for PWUD could potentially address both stigma and privacy concerns [14]. Lastly, concern about drug use interfering with treatment was another commonly cited reason for unwillingness. This may be due to PWUD appreciating the potential medical consequences of drug use and thus having an underlying motivation to cease using. Together, these findings highlight the need for a spectrum of drug-related services in hospital settings, including harm reduction and treatment services, to better address the diverse needs of hospitalised PWUD.

The present study demonstrates a high degree of willingness to use in-hospital SIRs among people who smoke crack cocaine, particularly those at elevated risk of health-related harms, including high intensity users and those who have previously used drugs in hospital. Although further research is needed to determine operational preferences and potential health impacts of in-hospital SIRs among PWUD, this study suggests that the establishment of such a service in this setting may provide opportunities to reshape the social and structural contexts of hospital care and improve health outcomes for drug-using populations. Given the general lack of services that provide regulated crack smoking settings in Canada, the implementation of in-hospital SIRs should be considered as a key component of broader efforts to better address the needs of people who inhale drugs in harm reduction and health services. Such SIRs would not necessarily need to be established separate from SIFs, but could instead be co-located with SIFs as hospital-based supervised drug consumption facilities, as has been recently implemented in a hospital in France [30]. However, we should note that, under existing federal legislation in Canada, various bureaucratic and infrastructural barriers to establishing SIRs persist, and only one SIR has been approved in Canada to date [39]. With the current overdose epidemic in Canada, temporary supervised consumption sites, known as overdose prevention sites, have been implemented by regional health authorities with the cooperation of community partners in the provinces of British Columbia and Ontario [40]. Several of these facilities provide a space for people to inhale drugs under supervision. However, these services have only received provincial approval to operate and have not received exemptions from federal drug laws. Compared to those based in community settings, in-hospital SIRs could be more feasible if rooms with operating ventilation systems already exist. However, workplace safety regulations that prohibit smoking in hospitals will likely make hospital-based SIRs especially difficult to establish in

Canada [41]. Thus, reforms to existing workplace safety laws and hospital policies may be needed to enable the implementation of SIRs in hospital settings.

There are several limitations to this study. The cross-sectional design of this study limits our ability to infer temporality of observed relationships between explanatory variables and willingness to use an in-hospital SIR. In addition, this study relied on self-reported data that is susceptible to reporting bias, including social desirability and recall bias. A further limitation is that our study sample was comprised of people who may also inject or use other illicit drugs and who may or may not have been previously hospitalised. Therefore, the observed prevalence of willingness may differ from other specific populations such as those who primarily smoke crack cocaine or those who have previously been hospitalised during periods of active drug use. Future studies should continue to investigate the role of healthcare-related factors, including frequency of hospitalisation, in affecting acceptance and uptake of hospital-based harm reduction services such as SIRs. In addition, given that this study was restricted to people who smoke crack cocaine, future research should investigate the acceptability of hospital-based SIRs among people who smoke drugs other than crack cocaine (e.g. opioids, methamphetamine), and the potential role of these facilities in reducing harms related to drug use while hospitalised (e.g. withdrawal, inadequate pain management) among distinct subpopulations of PWUD. Finally, the VIDUS and ACCESS cohorts are community-recruited, non-randomised samples and therefore our findings may not be generalisable to people who use crack in Vancouver or other settings.

We found that the majority of people who smoke crack cocaine were willing to use an in-hospital SIR, if established, and that those who expressed willingness were more likely to report higher-intensity crack cocaine use and use of illicit drugs during previous hospitalisations. These findings suggest a potential role for SIRS in hospital settings to complement existing harm reduction and healthcare services for PWUD. However, further research is needed to characterise the uptake and potential health outcomes of these services among diverse subpopulations of people who smoke illicit drugs.

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Table 1

Bivariable analyses of factors associated with willingness to access an in-hospital safer inhalation room among 539 people who use crack cocaine in Vancouver, Canada (2013–2014).

Characteristic	Willingness to access an in-hospital SIR		OR (95% CI)	P - value
	Yes, n (%) n = 320	No/Unsure, n (%) n = 219		
<i>Age</i>				
Median, year	49.2	50.7	0.98 (0.95 – 1.00)	0.026
IQR	(43.9 – 54.5)	(45.6 – 55.4)		
<i>Gender</i>				
Male	199 (62.2)	147 (67.1)	1.24 (0.87 – 1.78)	0.241
Female	121 (37.8)	72 (32.9)		
<i>Caucasian</i>				
Yes	172 (53.8)	119 (54.3)	0.98 (0.69 – 1.38)	0.893
No	148 (46.3)	100 (45.7)		
<i>HIV serostatus</i>				
Yes	150 (46.9)	111 (50.7)	0.86 (0.61 – 1.21)	0.385
No	170 (53.1)	108 (49.3)		
<i>Homeless*</i>				
Yes	37 (11.6)	30 (13.7)	0.82 (0.49 – 1.37)	0.445
No	282 (88.1)	187 (85.4)		
<i>DTES residency*</i>				
Yes	211 (65.9)	133 (60.7)	1.25 (0.88 – 1.79)	0.217
No	109 (34.1)	86 (39.3)		
<i>Daily cocaine injection*</i>				
Yes	23 (7.2)	12 (5.5)	1.34 (0.65 – 2.75)	0.431
No	297 (92.8)	207 (94.5)		
<i>Daily heroin injection*</i>				
Yes	55 (17.2)	24 (11.0)	1.69 (1.01 – 2.82)	0.046
No	265 (82.8)	195 (89.0)		
<i>Daily non-injection crack use*</i>				
Yes	103 (32.2)	46 (21.0)	1.79 (1.20 – 2.67)	0.005
No	217 (67.8)	173 (79.0)		
<i>Binge non-injection drug use*</i>				
Yes	102 (31.9)	51 (23.3)	1.54 (1.04 – 2.28)	0.030
No	218 (68.1)	168 (76.7)		
<i>Shared crack pipe*</i>				
Yes	93 (29.1)	75 (34.2)	0.80 (0.55 – 1.15)	0.229
No	224 (70.0)	144 (65.8)		
<i>Difficulty finding new crack pipes*</i>				
Yes	30 (9.4)	36 (16.4)	0.52 (0.31 – 0.88)	0.015

Characteristic	Willingness to access an in-hospital SIR		OR (95% CI)	P - value
	Yes, n (%) n = 320	No/Unsure, n (%) n = 219		
No	288 (90.0)	181 (82.6)		
<i>Bought used crack pipe off street*</i>				
Yes	6 (1.9)	9 (4.1)	0.45 (0.16 – 1.27)	0.131
No	314 (98.1)	210 (95.9)		
<i>Smoked crack in public*</i>				
Yes	51 (15.9)	39 (17.8)	0.87 (0.55 – 1.37)	0.546
No	268 (83.8)	178 (81.3)		
<i>Overdosed*</i>				
Yes	17 (5.3)	14 (6.4)	0.82 (0.40 – 1.71)	0.604
No	302 (94.4)	205 (93.6)		
<i>Left hospital AMA for drugs*</i>				
Yes	6 (1.9)	4 (1.8)	1.03 (0.29 – 3.68)	0.967
No	314 (98.1)	215 (98.2)		
<i>Ever used drugs in hospital</i>				
Yes	156 (48.8)	74 (33.8)	1.86 (1.31 – 2.66)	<0.001
No	164 (51.3)	145 (66.2)		
<i>Ever treated poorly by healthcare worker</i>				
Yes	38 (11.9)	26 (11.9)	1.00 (0.59 – 1.70)	0.999
No	282 (88.1)	193 (88.1)		
<i>Drug or alcohol treatment*</i>				
Yes	216 (67.5)	130 (59.4)	1.42 (1.00 – 2.03)	0.053
No	104 (32.5)	89 (40.6)		
<i>Sextrade*</i>				
Yes	28 (8.8)	16 (7.3)	1.22 (0.64 – 2.31)	0.548
No	292 (91.3)	203 (92.7)		
<i>Probed by police*</i>				
Yes	34 (10.6)	23 (10.5)	1.01 (0.58 – 1.77)	0.963
No	283 (88.4)	194 (88.6)		

AMA, against medical advice; CI, confidence interval; DTES, Downtown Eastside; IQR, interquartile range; OR, odds ratio; SIR: safer inhalation room.

* Activities reported in the six months prior to interview.

Table 2

Multivariable logistic regression analysis of factors associated with willingness to access an in-hospital safer inhalation room among 539 people who use crack cocaine in Vancouver, Canada (2013–2014)

Variable	AOR	95% CI	<i>p</i> - value
Age	0.98	(0.96 – 1.00)	0.086
Daily non-injection crack use *	1.63	(1.08 – 2.48)	0.021
Binge non-injection drug use *	1.47	(0.98 – 2.21)	0.063
Difficulty finding new crack pipe *	0.51	(0.30 – 0.86)	0.013
Ever used drugs in hospital	1.89	(1.31 – 2.73)	<0.001

AOR, adjusted odds ratio; CI, confidence interval.

* Activities reported in the six months prior to interview.